Acta Zootaxonomica Sinica, 36 (2): 301 –314 (Apr. 2011) ISSN 1000-0739
动物分类学报

A TAXONOMIC STUDY OF THE GENUS *MYOSPILA* RONDANI (DIPTERA, MUSCIDAE) FROM GUIZHOU, CHINA, DESCRIPTIONS OF FIVE NEW SPECIES BELONGING TO THE *M. LAUTA* GROUP

WEI Lian-Meng
Centre for Disease Prevention and Control of Anshun City, Guizhou 561000, China; E-mail: wlm510520@sina.com

Abstract Five new species of the genus *Myospila* Rondani, 1856 (Diptera, Muscidae) are described and illustrated from Guizhou, Southwestern China: *M. fengi* sp. nov., *M. flavibasisoides* sp. nov., *M. sublauta* sp. nov., *M. subflavibasis* sp. nov. and *M. xuthosa* sp. nov., which belong to the *M. lauta* species-group. A key to all species of the *M. lauta* species-group is provided. The type specimens of the new species are kept in the Centre for Disease Prevention and Control of Anshun City, Guizhou (CDPCAG).
Key words Diptera, Muscidae, *Myospila*, new species, new species-groups, China.

1 Introduction

The genus *Myospila* Rondani, 1856 is a large natural group, belonging to the subfamily Mydaeinae (Diptera, Muscidae). At present, 102 species (and subspecies) are known distributed in all zoogeographic regions, including 44 (31 endemic) species (and subspecies) in the Oriental (Emden, 1965; Pont, 1977; Shinonaga and Thinh, 2000), 18 (16 endemic) in the Afrotropical (Pont, 1980), 20 (18 endemic) in the Australasian (Vockeroth, 1972; Pont, 1989), 15 (4 endemic) in the Palaearctic (Pont, 1986; Shinonaga, 2003), 6 (5 endemic) in the Neotropical (Couri, 2002) and only one common species in the Nearctic (Pont, 1972) regions.

As early as the 1940's, two species of this genus from China were recognized by Wu, C-F in his work "Catalogus Insectorum Sinensium". Since then, a total of 29 species of Chinese *Myospila* have been reported (Fan, 1965, 1992; Li, 1980; Wei, 1991 and Xue *et al.*, 1996). In the last 10 years, Feng and his co-workers reported 26 species mainly from Southwestern China (especially Sichuan), in which 20 were new species and one new species from Eastern China (Feng, 2000a, b, 2001, 2003, 2005a, b, 2007; Guan *et al.*, 2007; Qian and Feng, 2005) and Xue and Yang (1998) described one new species from Zhejiang, Eastern China. *Myospila* of the Guizhou area have been collected and studied by the author from 1991, especially in recent years, with more than 6 000 specimens collected and preserved, belonging to 46 species (a few are only known from females and 20 are new to science). These new species may be divided into distinct species-groups and will be published in future. Presently some 70 species of *Myospila* are known from China.

In the present paper, five new species of *Myospila* from Guizhou, China are described, all assigned to the herein newly defined *M. lauta* group. A key to all species assigned to this species group is provided.

2 Material and Methods

Morphological terms generally follow McAlpine (1981). The following abbreviations are used in the descriptions: *an*-anterior seta; *ad*-antero-dorsal seta; *av*-antero-ventral seta; C-costa; *d*-dorsal seta; f_1-fore femur; f_2-mid femur; f_3-hind femur; *ia*-intra-alar seta; L Ⅰ-fore leg, L Ⅱ-mid leg, L Ⅲ-hind leg; *p*-posterior seta; *pd*-postero-dorsal seta; *pv*-postero-ventral seta; t_1-fore tibia; t_2-mid tibia; t_3-hind tibia. The type specimens of the new species are housed in the Centre for Disease Prevention and Control of Anshun City, Guizhou (CDPCAG).

3 Taxonomy

Genus *Myospila* Rondani

Dipterol. Ital. Prodromus, 1: 91, 1856. Type species: *Musca meditabunda* Fabricus, 1781, by Rondani (1856: 91).

Diagnosis. Male frons usually narrow, but for *M. latifrons* Wei, 1991 and *M. effeminate* Vockeroth, 1972 with frons as wide as that of female; arista plumose; prementum short, labella developed. Anepimeron bare, prosternum hairy or bare, katepisternal setae 1:2 or 2:2. Vein *Sc* bow-shaped; radial node haired dorsally and ventrally, except *M. lenticeps* (Thomson, 1869) and *M. anglula* Wei, sp. nov. bare dorsally; vein M_{1+2} more or less bent foreward apically; $2R_5$ with width of open door at least

This work was supported by the Guizhou Provincial Governor Fund of Talented Person for Excellent Science, Technology and Education [(2005) 91].

Received 27 Dec. 2010, accepted 9 Mar. 2011.

as wide as 2 times length of vein r-m. Cx_3 bare posteriorly; t_3 without *pd*. Tergites 1 - 4 with full marginal and lateral setae ; tergites 4 - 5 with dorsocentral seta, and that of the latter is full. Sternites 2 - 5 with pair of strong setae.

Distribution. Worldwide.

Habitus. Recorded larval habitats include mammalian excrement, rotting fruit and diseased parts of plants. Cocooning occurs prior to pupariation in some species (Skidmore, 1986: 333).

***M. lauta* species-group**

Diagnosis. The *M. lauta*-group is herein defined and can be distinguished from other members of *Myospila* by the following features: scutellum with fine, more or less pale, decumbent hairs along lower margin; ♂ frons usually narrow, at most as wide as width of first flagellomere, individual wider; *ia* usually 1 + 1, but for both *M. flavibasis* (Malloch, 1925) and *M. frigoroida* Qian *et* Feng, 2005 with *ia* 1 + 2; scutellum usually yellow except for dorsum black; equalet and basicosta usually yellow, vein r_1 setulose dorsally, vein R_{4+5} at least setulose at base dorsally; legs usually mainly yellow and tarsus sometimes black; abdomen usually yellow at base or entirely yellow.

The *Myospila lauta* species-group includes the following species.

1) *M. ateripraefemura* Feng, 2005 (China, Sichuan, 750 - 2 100 m)
2) *M. borneoensis* Malloch, 1935 (Borneo)
3) *M. canoapicata* Emden, 1965 (Burma, Malaya, 1 463 - 2 000 m)
4) *M. fengi* sp. nov. (China, Guizhou, 640 m)
5) *M. flavibasis* (Malloch, 1925) (China, Sichuan, Taiwan; Japan)
6) *M. flavibasisoides* sp. nov. (China, Guizhou, 800 - 1 400 m)
7) *M. flavihumera* Feng, 2001 (China, Sichuan, 800 - 860 m)
8) *M. flavihumeroides* Feng, 2001 (China, Sichuan, 860 - 1 400 m)
9) *M. flavilauta* Xue *et* Li, 1996 (China, Yunnan)
10) *M. frigora* Qian *et* Feng, 2005 (China, Sichuan, 800 m)
11) *M. frigoroida* Qian *et* Feng, 2005 (China, Sichuan, 800 m)
12) *M. fulviventris* (Pont, 1968) (Philippines, Palawan, 600 m)
13) *M. lauta* (Stein, 1918) (China, Guangdong, Xianggang, Taiwan; Burma, Thailand, Indonesia)
14) *M. lautoides* Feng, 2005 (China, Sichuan, 860 - 1 450 m)
15) *M. latifrons* Wei, 1991 (China, Guizhou, 800 - 1 550 m)
16) *M. morosa* (Stein, 1918) (Srilanka, Ohiya)
17) *M. nigra* Shinonaga, 2000 (Vietnam, 930 - 1 230 m)
18) *M. polita* Malloch, 1935 (Borneo, 2 310 m)
19) *M. ponti* Xue *et* Liu, 1996 (China, Guangdong, Hunan)
20) *M. ruficollis* Emden, 1965 (S. India, Kodaikanal, 1 800 - 2 100 m)
21) *M. rufitarsis* Shinonaga, 2000 (Vietnam, 500 m)
22) *M. setosissima* Vockeroth, 1972 (New Guinea, 1 - 30 m)
23) *M. solennis* (Walker, 1856) (Malaya)
24) *M. subflavibasis* sp. nov. (China, Guizhou, 640 - 1 550 m)
25) *M. sublauta* sp. nov. (China, Guizhou, 350 - 1 300 m)
26) *M. tianmushanica* Feng, 2005 (China, Zhejiang, 850 m)
27) *M. xuthosa* sp. nov. (China, Guizhou, 700 m)

Distribution. Oriental, Australasian and Palaearctic regions.

Remarks. Twenty-seven species with more or less pale fine decumbent hairs on the lower edge of the scutellum from the Oriental, Australasian and Palaearctic Regions were recognized by many workers (Walker, 1856; Stein, 1918; Malloch, 1935; Emden, 1965; Pont, 1968; Vockroth, 1972; Wei, 1991; Xue *et* Li, 1996; Shinonaga *et* Thinh, 2000; Feng, 2001, 2005, 2007 and Qian *et* Feng, 2005). However, this feature did not catch the attention of previous authors (Malloch, 1935; Emden, 1965; Xue *et* Li, 1996; Shinonaga *et* Thinh, 2000; Feng, 2007). Malloch (1935) and Shinonaga *et* Thinh (2000) did not distinguishe these pale fine decumbent hairs from those of the normal basal piles on the scutellum beyond the level of marginal setae. Emden (1965), Xue *et al.* (1996) and Feng (2007) considered that the essentiality of this character was less than that of *ia* character although the above mentioned two characters were distinguished clearly and definitely (Emden, 1965: 436, figs 106a, b, c).

In the present paper, five new species (with *ia* 1 + 1) belonging to *M. lauta*-group related to *M. flavibasis* (Malloch, 1925) with *ia* 1 + 2. Otherewise, both *M. frigora* Qian *et* Feng, 2005 and *M. frigoroida* Qian *et* Feng, 2005 belonging to *M. lauta*-group related to *M. flavibasis* (Malloch, 1925), too but the former and the latter with *ia* 1 + 1 and 1 + 2, respectively. Therefore, it is reasonable that the character of the scutellum with more or less pale fine decumbent hairs on the lower edge should be regarded as more reliable or less variable than that of *ia* character and considered as unique synapomorphic feature and the *ia* character (1 + 1 or 1 + 2) may be trend character. To sum up, this derived character provides evidence for the

definition of *Myospila lauta*-group and will help to organize and classify this large genus.

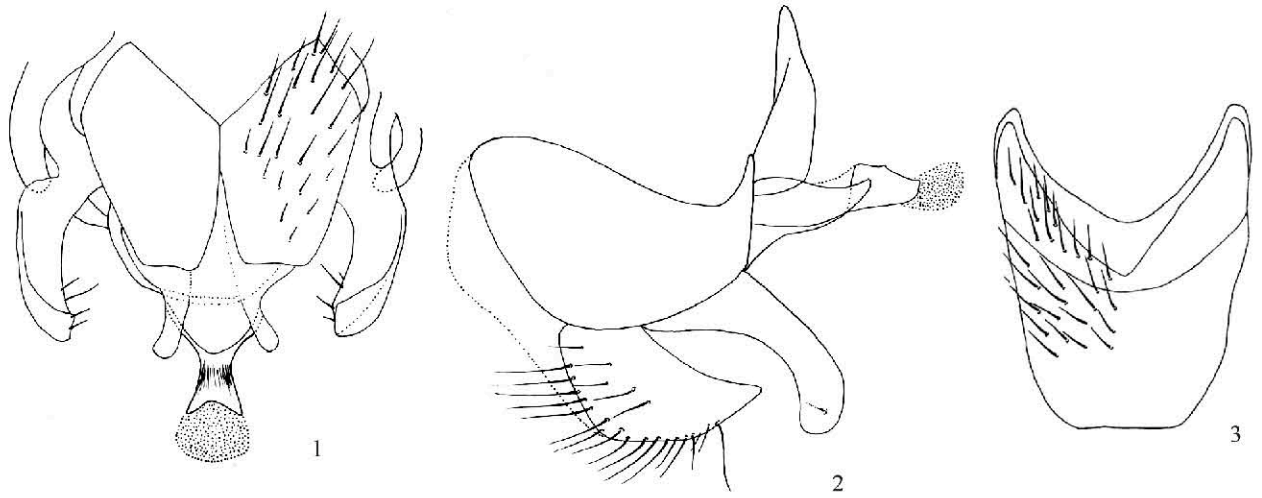
Key to species of the *Myospila lauta*-group.

(Only females of *M. polita* Malloch, 1935 and *M. setosissima* Vockeroth, 1972 are known and not included in the key).

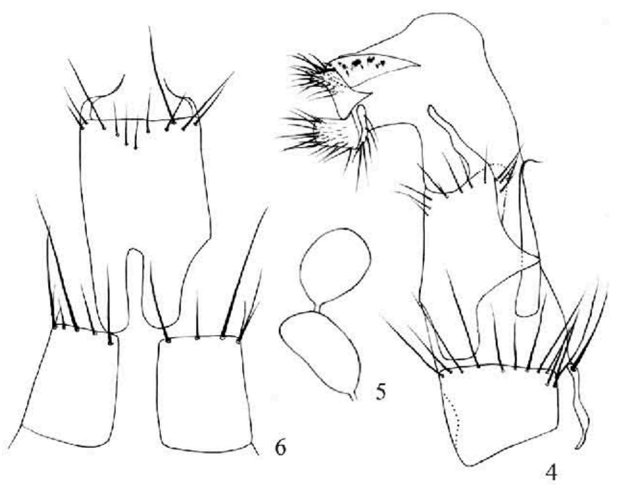
1. Prosternum hairy; radial node setulose dorsally and ventrally ··· 2
   Prosternum bare; radial node sometimes bare dorsally ··· other species-groups
2. Lower calypter wide, with distal margin cut, with inner margin close to scutellum edge; basal piles on scutellum dorsum in ♀ beyond the level of scutellar marginal setae ··· ***M. bina*-group**
   Lower calypter narrow, tongue-shaped, with distal margin round, with inner margin apart from scutellum edge; basal piles on scutellum dorsum usually not beyond the level of scutellar marginal setae ··· 3
3. Scutellum with fine, more or less pale, decumbent hairs along lower margin; male frons usually narrow, at most as wide as width of first flagellomere, individual widely separated; *ia* usually 1 + 1; scutellum usually yellow except for dorsum black; equalet and basicosta usually yellow, vein R_1 setulose dorsally, vein R_{4+5} at least setulose at base dorsally; legs mainly yellow, rarely black, tarsus sometimes black; abdomen often yellow basally or even yellow entirely, sometimes black entirely (*M. lauta*-group) ··· 4
   Scutellum bare on lateral part of ventral and lower parts of lateral surface, at most basal piles on dorsum beyond level of marginal setae; other features variable ··· **other species-groups**
4. Male frons rather wide, about 1/5 as wide as head width ··· ***M. latifrons* Wei, 1991**
   Male frons narrow, about as narrow as width of first flagellomere ··· 5
5. *Ia* 1 + 2 ··· 6
   Ia 1 + 1 ··· 7
6. Each of abdominal tergites 3 and 4 with pair of large darkish brown spots; tergite 5 orange yellow, with reddish apically ··· ***M. flavibasis* (Malloch, 1925)**
   Abdominal tergite 3 with wide black stripe; each of tergites 4 and 5 dark, neither spotted nor vitta yellow or reddish ··· ***M. frigoroida* Qian *et* Feng, 2005**
7. Tarsus black to brownish black ··· 8
   Tarsus yellow to darkish yellow or orange ··· 13
8. Femur black ··· 9
   Femur yellow partly ··· 10
9. Upper orbital seta 1 – 2; vein R_1 setulose on dorsal surface of middle and apical parts and with a few setulae on under side of at least apical part ··· ***M. solennis* (Walker, 1856)**
   Upper orbital seta absent; vein R_1 setulose on basal half ··· ***M. nigra* Shinonaga, 2000**
10. Femur black, apices testaceous-yellow ··· ***M. borneoensis* Malloch, 1935**
    Femur yellow, f_1 yellow or suffusedly with brown to brownish dark along dorsal surface ··· 11
11. Upper orbital seta absent; scutellum yellow except for dorsum black; calypter grey white; f_1 suffusedly brown along dorsal surface ··· ***M. lauta* (Stein, 1918)**
    Upper orbital seta present; scutellum black; calypter brownish yellow; f_1 yellow or not yellow entirely ··· 12
12. Basicosta yellow; f_1 yellow entirely ··· ***M. lautoides* Feng, 2005**
    Basicosta black; f_1 brown dorsally ··· ***M. sublauta* sp. nov.**
13. Abdomen black or fucous ··· 14
    Abdomen at least yellow basally or orange ··· 18
14. Leg yellow, at most tarsus black ··· 15
    Leg at least black partly ··· 17
15. Scutellum black ··· ***M. morose* (Stein, 1918)**
    Scutellum at least yellow partly ··· 16
16. Thorax black; tarsus yellow ··· ***M. canoapicata* Emden, 1965**
    Thorax yellow; tarsus black ··· ***M. ruficollis* Emden, 1965**
17. F_1 light black ··· ***M. atripraefemura* Feng, 2005**
    F_1 yellow but darkish yellow in basal half ··· ***M. flavilauta* Xue *et* Li, 1996**
18. Abdomen yellow to brownish yellow ··· 19
    Abdomen black, yellow or orange basally ··· 23
19. Body yellow to brownish yellow ··· ***M. xuthosa* sp. nov.**
    Body dark, only abdomen yellow to brownish yellow ··· 20
20. F_1 yellow, f_2 black except for apical 1/3 yellow ··· ***M. fulviventris* (Pont, 1968)**
    F_1 black or brownish black, only yellow apically, f_2 yellow ··· 21
21. Notopleuron bare ··· ***M. ponti* Xue *et* Liu, 1996**
    Notopleuron haired ··· 22
22. Male reclinate orbital seta 2, katepisternal setae 1∶2, f_3 with *pv* in basal half ··· ***M. tianmushanica* Feng, 2005**
    Male reclinate orbital seta 1, katepisternal seta 2∶2, f_3 without *pv* ··· ***M. fengi* sp. nov.**
23. Male reclinate orbital seta 3, inclined frontal seta 10 ··· ***M. frigora* Qian *et* Feng, 2005**
    Male reclinate orbital seta 0 – 1, inclined frontal seta 5 – 7 ··· 24
24. Male reclinate orbital seta 0; femora, tibiae and tarsi orange ··· ***M. rufitarsis* Shinonaga, 2000**
    Male reclinate orbital seta 1; femora, tibiae and tarsi yellow ··· 25
25. Male sternite 5 with length longer than width, lateral lobe not visibly shorter than height; in profile surstylus round apically ··· 26
    Male sternite 5 with length shorter than width, lateral lobe visibly shorter than height; in profile surstylus not round apically ··· 27
26. Male frons narrow, frontal vitta disappear; first flagellomere darkish yellow; both posterior spiracle and femur yellow ··· ***M. flavibasisoides* sp. nov.**
    Male frons wide, frontal vitta present; first flagellomere dark; posterior spiracle and femur mainly blackish brown ··· ***M. subflavibasis* sp. nov.**
27. Notopleuron haired; viewed posteriorly cercus straight marginally; in profile surstylus not slender ··· ***M. flavihumera* Feng, 2001**
    Notopleuron bare; viewed posteriorly cercus curved marginally; in profile surstylus slender ··· ***M. flavihumeroides* Feng, 2001**

3.1 *Myospila fengi* sp. nov. (Figs 1 – 6)

Male. Body length about 5.0 – 6.1 mm. Head large and round, ground colour brownish black, covered with grey pollen. Compound eye bare, anterior inner facets distinctly enlarged. Frons narrow, slightly wider than anterior ocellus-width. Frontal vitta absent of pollen, entirely absent at narrowest point. Reclinate upper orbital seta 1. Inclined frontal setae 5 – 8, distributed in anterior half of frontal vitta. Antennae blackish brown, scape, pedicel and base of first flagellomere darkish yellow; first flagellomere somewhat 3 times as long as pedicel-length, or about 3.3 times as long as its width. Arista darkish yellow, long-plumose, length of rays slowly decreasing from middle onwards, longest rays about 0.7 of first flagellomere-length. Lunule brownish yellow. Parafacial gradually become marrow downwards, clearly narrower than 0.5 of first flagellomere-width in mid part. Lower facial margin protruding, but not beyond profile of frons. Vibrissa strong. Palpus stick-like, black. Prementum stout, brown. Labrum brown, developed. Gena somewhat narrower than first flagellomere-width or about 0.07 as high as eye-height. Postgena with dark setulae. Median occipital sclerite with long trapezoidal vitta, narrower above than below and lacking pollinosity.



Figs 1 – 3. Male terminalia of *Myospila fengi* sp. nov. 1. Male terminalia in posterior view. 2. Male terminalia in profile. 3. Male sternite 5 in ventral view.



Figs 4 – 6. Female terminalia of *Myospila fengi* sp. nov. 4. Female terminalia in profile. 5. Female spermathecae. 6. Female sternites 6 – 7 in dorsal view.

Thorax. Black, pleura more or less darkish yellow; scutellum brownish yellow, black medially; thinly grey pollinose. Viewed from posterior, scutum with 4 dark longitudinal vittae, in which black inner paramedian vittae rather clean before tranverse suture; outer paramedian vittae brown, wider and faint. Anterior postpronotal seta 0 and basal postpronotal seta 2. Acrostichal seta 0 + 1. Hairs between dorsocentral setal row before transverse suture in about 10 rows. Dorsocentral setae 2 + 4. Supra-alar setae 1 + 2; first postsutural seta distinctly weaker, just distinguishable from basal piles. *Ia* 1 + 1. Katepisternal setae 2∶2. Prosternum hairy. Katatergite densely with yellow hairs. Notopleuron bears 5 hairs around 2nd notopleural seta. Anatergite, katepimeron, meron, metepisternum, postalar wall, proepisterum and anepimeron bare. Thoracic spiracles brown. Scutellum dark, with basal piles on dorsum not beyond level of marginal setae of scutellum but with fine pale decumbent hairs along lower margin.

Wing. Yellow, with equalet brownish yellow and basicosta yellow. Spine presents. Subcosta bow-shaped. Costa setulose ventrally. Radial node setulose dorsally and ventrally. Vein R_1 setulose dorsally, distributed in basal 2/5. Vein R_{4+5} with setulae distributed before crossvein r-m. Vein M_{1+2} slightly curved anteriorly. Calypter yellow, lower ones narrow with apex tongue-shape, with inner margin apart from scutellum edge. Halter yellow.

Leg. Yellow, only cox_{1-2} and f_1 brownish in basal half. L Ⅰ: tibiae without middle seta. L Ⅱ: F_2 with developed basal pile anteriorly and row of *an* in basal half, sturdy and short; with rows of *av* and *pv* developed in basal half and as weak as hairs in distal half, former stronger than latter; with 0 – 1 *ad* and obliquely arranged 3 *pd* nearly apex, latter gradually developed distally. T_2 with short and weak 4 *p*. L Ⅲ: F_3 with strong, uniform dense *ad* row and sparsely with weaker and shorter *av* row becoming gradually stronger towards tip; with 2 *pd* apically, without *pv* in distal half. T_3 with 2 *av* and 2 *ad*, respectively.

Abdomen. Brownish yellow. Each of tergites 3 – 4 with pair of stripe-like spots, outside of which with irregular dark spots. Tergite 5 with faint brownish spots, almost stripe-like.

Female. Body length about 7.0 mm. Similar to male but differs as follows: frons about as wide as 0.3 times head-width in mid part. Parafrontalia about as wide as 1/6 of frontal vitta-width. Ocellar triangle extends to anterior margin of frons. Reclinate upper orbital seta 2. Gena narrower than first flagellomere-width or about 0.08 as high as eye-height.

Holotype ♂, Huajiang Grand Canyon, Guanling, Guizhou (25° 41′ N, 105° 36′ E; alt.

640 m), Sep. – Dec. 2008 – 2009, collected by WEI Lian-Meng, LIU Mei-Hua, CAO Wei-Ping, JIANG Shao-Gui, LONG Biao and SHOU Tian-Hong. Paratypes: 4 ♂♂, 1 ♀, same data as holotype; 1 ♂, 1 ♀, Duanqiao, Guanling, Guizhou, alt. 700 m, Mar. – Apr. 2008 – 2009, collected by WEI Lian-Meng, LIU Mei-Hua, CAO Wei-Ping, JIANG Shao-Gui and LONG Biao.

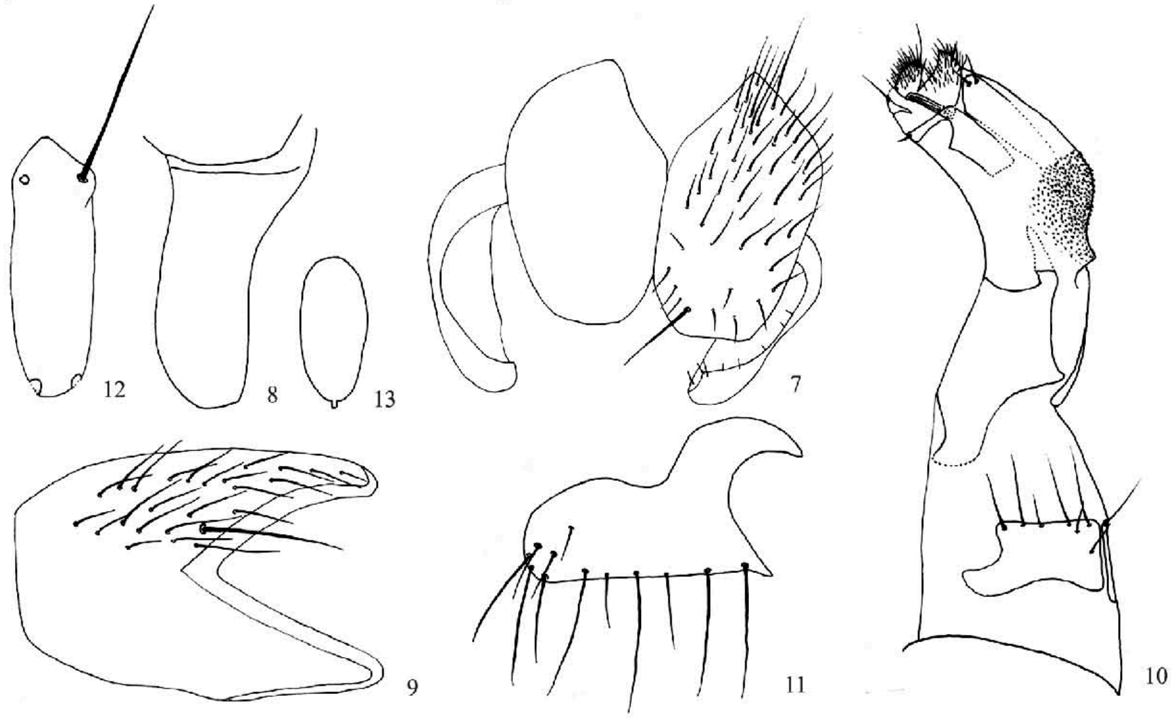
The new species is related to *M. ponti* but differs from the latter by notopleuron with hairs, katepisternal setae 2∶2, and male cercus with end not distinctly narrowly constricted (the latter with end of cercus distinctly narrowly constricted) and the apical inner margin of cercus clearly separated (that of the latter completely connected to each other). In profile, male cercus ends in only one acute beak-like lobe, whereas the latter's cercus ends in two wider and larger lobes; surstylus is fine and narrow stick-like, remarkably bent and extending beyond the cercus, while the latter's surstylus is wider and shorter strip-like, not extending beyond cercus.

Otherwise, in the *Myospila lauta* species-group, there are three other species, *M. fulviventris*, *M. ponti* and *M. tianmushanica* with entirely yellow abdomens, but the new species can be separated from them by the features of the key.

Etymology. The species is named after associate chief physicians FENG Yan to show author's respect for him.

3.2 ***Myospila flavibasisoides* sp. nov.** (Figs 7 – 14)

Male. Body length 4.2 – 7.0 mm. Head large and round, ground colour black, covered with silver-grey pollen. Compound eyes bare, anterior inner facets enlarged clearly. Frons slightly wider than anterior ocellus-width. Frontal vitta completely disappears in narrowest part. Reclinate upper orbital seta 1. Inclined frontal seta 5, mixed with individual setulae, distributed in anterior half of frons. Antennae dark, scape and pedicel brownish yellow. First flagellomer slightly shorter than 0.7 of pedicel-length or about equal to 2.8 of itself width apically (widened distally). Arista yellow brown, long-plumose, length of rays slowly decreasing from middle onwards, the longest rays about 0.7 as long as width of first flagellomere. Lunule brownish yellow. Parafacial about as wide as 1/4 of first flagellomere-width apically. Facial ridge and genal groove somewhat dark reddish. Lower facial margin protruding, but not beyond profile of frons. Vibrissa strong. Palpus brownish black. Prementum stout, brown. Labrum brown, developed. Gena slightly shorter than first flagellomere-width. Postgena with dark setulae. Median occipital sclerite with long trapezoid vitta, narrower above than below and lacking pollinosity.



Figs 7 – 13. Male and female terminalia of *Myospila flavibasisoides* sp. nov. 7. Male terminalia in posterior view. 8. Male surstylus in anterior view. 9. Male sternite 5 in ventral view. 10. Female terminalia in profile. 11. Female tergite 6 in dorsal view (flattened). 12. Female sternite 6 in dorsal view (flattened). 13. Female spermathecae.

Thorax. Pleura more or less brownish yellow, especially postpronotal lobe yellow, covered with grey yellowish pollen, densely on scutum. Viewed posteriorly, paramedian vittae black and clarity before transverse suture. Both outer and inner paramedian vittae brown behind transverse suture, latter faint. Anterior postpronotal seta 0 and basal postpronotal seta 2. Acrostichal seta 0 + 1. Hairs between dorsocentral setal row before transverse suture in 10 – 12 rows. Dorsocentral setae 2 + 4. Supra-alar setae 1 + 2; first postsutural seta distinctly weaker, slightly distinguishable from basal piles. *Ia* 1 + 1. Katepisternal seta 1∶2. Prosternum haired. Katatergite densely with yellow hairs. Notopleuron bare. Anatergite, katepimeron, meron, metepisternum, postalar wall, proepisterum and anepimeron bare. Thoracic spiracles yellow, posterior one darker. Scutellum yellow but for basal dorsum dark, with basal piles on dorsum not beyond level of scutellum marginal setae but with fine pale decumbent hairs along lower margin.

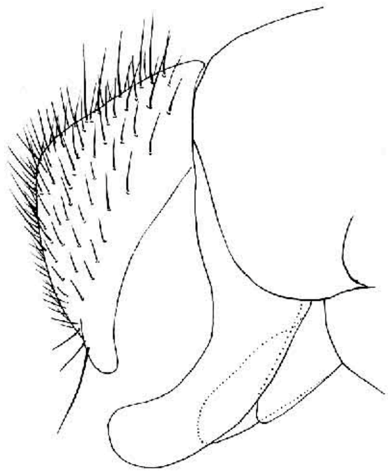
Wing. Brownish yellow with equalet brownish yellow and basicosta yellow. Spines present. Subcosta curved in bow-shaped. Costa setulose ventrally. Vein R_1 with row of long setulae on about basal 1/3 dorsally. Radial node setulose dorsally and ventrally. Vien R_{4+5} with 3 setulae on base dorsally. Vein M_{1+2} slightly bent forward apically. Calypter yellow, lower ones narrow, with apex tongue-shape and inner margin apart from scutellum edge. Halter yellow.

Leg. Yellow, only coxae somewhat dark brownish. L Ⅰ: tibiae without middle seta. L Ⅱ: F_2 with developed basal pile anteriorly and row of *an* in basal half, sturdy and short; with rows of *av* and *pv* developed in basal half and hair-like in distal half, former stronger than latter; with undeveloped *ad* preapically. T_2 with 3 – 4 *pd*. L Ⅲ: F_3 strong and tidy dense *ad* row and sparsely with weaker and shorter *av* row gradually stronger towards tip; with 2 *pd* apically, without *pv* in distal half. T_3 with 2 *av* and 2 *ad*, respectively.

Abdomen. Concolorous with thorax, but yellow basally. Each of tergites 3 – 4 with pair of faint dark spots turned colour depending on angle viewed, general stripe viewed anteriorly but largely triangular when viewed posteriorly. T_5 brown apically.

Female. Body length about 6.5 mm. Similar to male but differs as follows. Facets on upper 2/3 of compound eye unclearly enlarged. Frons rather wider, which is wider anteriorly than posteriorly, mid part about as wide as 0.3 of head-width. Ocellar triangle extends to anterior margin of frons. Inclinate frontal seta 3, mixed with hair-like setae. Proclinate upper orbital seta 2. Thorax with all longitudinal vittae reaching scutoscutellar suture. Notopleuron with hair behind anterior notopleural seta. Leg t_3 with *av*. Abdomen with ground colour darkish red, shiney, dust faint. Tergite 3 with dark middle vitta and narrower marginal band posteriorly. Tergite 4 nearly entirely dark except anterior margin darkish red. Tergite 5 dark, but darkish red apically. Female terminalia and spermathecae as in Figs 10 – 13.

Holotype ♂, Jiaozhishan Frorest Farm, Anshun, Guizhou (26°20′N, 105°57′E; alt. 1 400 m), 22 Oct. 1989, collected by WEI Lian-Meng and LIU Mei-Hua. Paratypes: 1 ♂, 1 ♀, Huangguoshu, Guizhou, alt. 800 m, date unknown, collected by WEI Lian-Meng, LIU Mei-Hua, ZHANG Xiao and DU Yu-Zhou; 1 ♂, Chenguan Forest Farm, Pingba, Guizhou, alt. 1 200 m, 29 Feb. 2008, collected by WEI Lian-Meng, LIU Mei-Hua, CAO Wei-Ping, JIANG Shao-Gui and WANG De-Xiang.



14

Fig. 14. Male terminalia of *Myospila flavibasisoides* sp. nov., in profile.

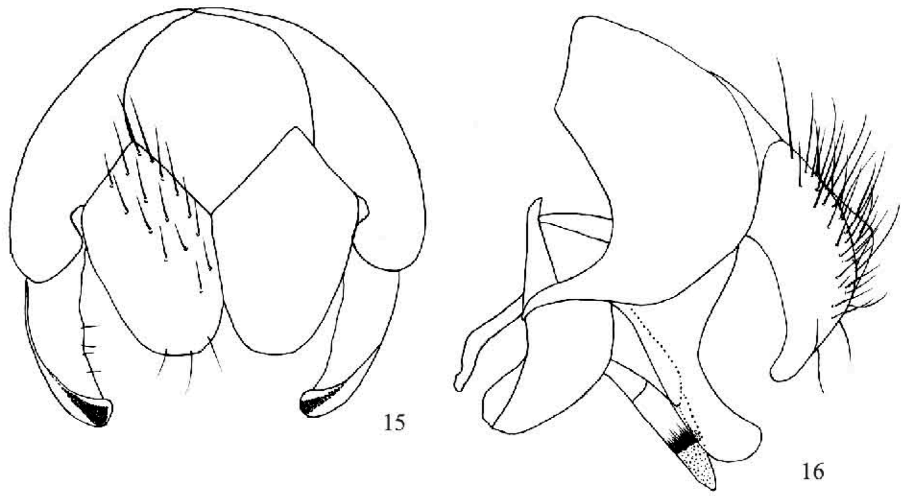
The new species is closely related to *M. subflavibasis* sp. nov., but both of them can be separated from each other by the features in the key. Also, this new species is related to *M. flavibasis*, but can be distinguished from the latter by the following characters: thoracic spiracles yellow to dark yellow; *ia* 1 + 1; t_2 with 3 *p*; each of tergites 3 – 4 with strip-like vittae. Tergite 5 black, brownish apically. Terminalia: male cerci with apex flattened. Surstylus with end dully rounded in anterior view. Female: tergite 6 duck-like; tergite 7 with posterior upper angle short and flattened, anterior margin curved towards inner anterior lower angle long and spear-like, which points to anterior; tergite 8 is strap-like, weakly sclerotized posteriorly; tergite 9 triangular. Although sternite 8 is finger-like, it is weakly sclerotized and not contracted preapically; sternite 9 rectangle, upper portion with sclerotized crossband.

Etymology. The specific name is from the Latin word "*flavibasis*", meaning "base is yellow", and "*oides*" meaning "similar in form", in reference to its

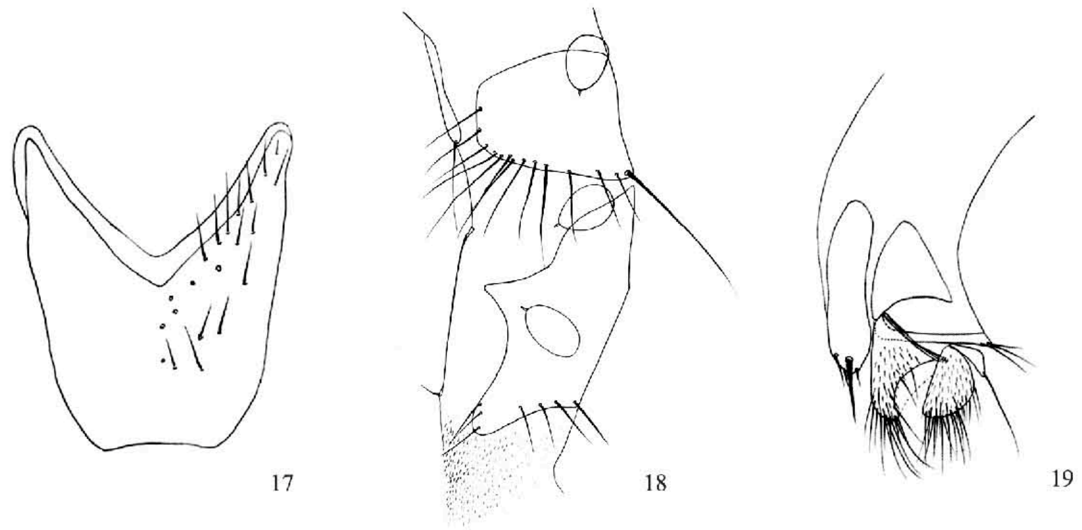
similarity to *M. flavibasis*.

3.3 *Myospila subflavibasis* sp. nov. (Figs 15 – 19)

Male. Body length about 4.5 mm. Head large and round, ground colour black to brownish black, covered with silver-grey pollen. Compound eye bare, facets somewhat enlarged on upper 3/4 of compound eye. Frons narrower than anterior ocellar-width at narrowest portion. Frontal vitta bare at narrowest point. Reclinate upper orbital seta 1, developed. Inclined frontal seta 5, mixed with individual setulae, distributed upwards to middle of frons. Antennae black, first flagellomere about 4.1 times as long as wide or about 3.1 times as long as pedicel-length. Arista brown, long-plumose, length of rays slowly decreasing from middle onwards, longest rays about 0.7 of first flagellomere-length. Lunule brownish yellow. Parafacial about 1/2 of first flagellomere-width apically. Lower facial margin protruding, but not beyond frons in profile. Vibrissa strong. Palpus stick-like, brownish black. Prementum stout, brownish black. Labrum brown, developed. Genal groove brownish. Gena somewhat higher than width of first flagellomere or about 0.1 as high as eye-height. Postgena with dark setulae. Median occipital sclerite with long trapezoid vitta, narrower above than below and lacking pollinosity.



Figs 15 – 16. Male terminalia of *Myospila subflavibasis* sp. nov. 15. Male terminalia in posterior view. 16. Male terminalia in profile.



Figs 17 – 19. Male and female terminalia of *Myospila subflavibasis* sp. nov. 17. Male sternite 5 in ventral view. 18. Female tergites 6 – 7, sternite 6 – 7 and spermathecae in profile. 19. Female tergites 8 – 9, sternites 8 – 9 and cercus in profile.

Thorax. Black, thinly covered with grey pruinosity, but thicker on prescutum. Viewed from posterior, scutum with 4 dark longitudinal vittae, in which inner black paramedian ones rather clean before tranverse suture and outer paramedian ones wider and faint. Anterior postpronotal seta 0 and basal

postpronotal seta 2. Acrostichal seta 0 + 1. Hairs between dorsocentral setal row before transverse suture in about 12 rows. Dorsocentral setae 2 + 4. Supra-alar setae 1 + 2; 1st postsutural distinctly weaker, just distinguishable from basal piles. *Ia* 1 + 1. Katatergite with dense yellow hairs. Notopleuron bare. Katepisternal setae 1 : 2. Prosternum haired. Metepisternum bare. Anatergite, katepimeron, meron, metepisternum, postalar wall, proepisterum and anepimeron bare. Anterior thoracic spiracle white-yellow; posterior spiracle dark. Scutellum yellow, except for dorsum black midially, with basal pile on dorsum not beyond level of scutellar marginal seta but with fine more or less pale decumbent hairs along lower margin.

Wing. Yellow, with equalet and basicosta yellowish brown. Spine present. Subcosta bow-shaped. Costa setulose ventrally. Vein R_1 setulose dorsally, distributed in basal 2/5. Radial node setulose dorsally and ventrally. Vein R_{4+5} setulose at base dorsally and ventrally. Vein M_{1+2} curved forward apically. Calypter yellow, lower ones narrow, with apex tongue-shape; inner margin apart from scutellum edge. Halter yellow.

Leg. Yellow, coxae black to brownish black; f_1 blackish brown except tip yellow; f_{2-3} usually more or less darkish brown medially, but sometimes yellow; distal 3 tarsi darkish yellow. L Ⅰ: tibiae without middle seta. L Ⅱ: F_2 with well developed preapical *an*, as long as f_2 is thick, and obliquely arranged 2 *pd*, upper one stronger and with row of *an* in basal half, in which 3 near middle as strong as spine and remarkablely erect. T_2 with 2 *p*. L Ⅲ: F_3 densely with strong and tidy *ad* row and sparsely with weaker and shorter *av* row; gradually stronger towards tip; with 2 *pd* apically, without *pv* in distal half. T_3 with 1 *av* and 1 *ad*, respectively.

Abdomen. Concolorous with thorax. Syntergites 1 + 2 with dark mid vitta, and with darkish yellow band on lateroposterior margin. Each of tergites 3 – 4 with darkish yellow band on lateroposterior margin. Tergite 5 darkish yellow apically.

Female. Body length about 4.5 – 6.0 mm. Similar to male but differs as follows. Frons about 0.3 as wide as head-width across mid part. Ocellar triangle reaching to frontal anterior margin. Parafrons with 2 reclinate upper orbital seta and 4 inclinate frontal setae, in which 2 developed and outer of frontal setal row with row of setulae. Parafacial about 0.35 as wide as first flagellomere-width and latter with length about 2.4 times as wide as pedicel. Gena about 0.15 as high as compound eye length or slightly narrower than first flagellomere-width. Vein R_1 with setulae dorsally on basal 1/2. Vein R_{4+5} with setulae dorsally and ventrally in basal half. Female terminalia and spermathecae as Figs 17 – 19.

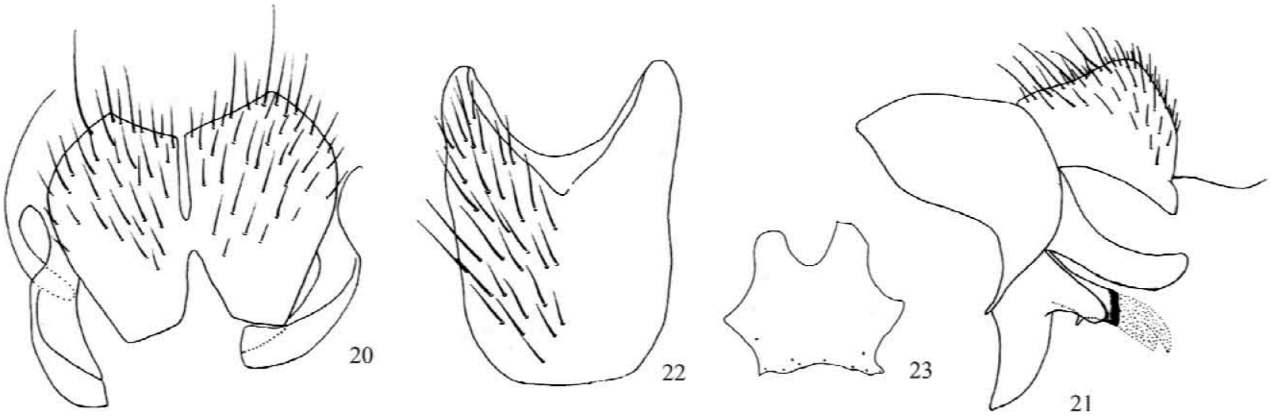
Holotype ♂, Longgong, Anshun, Guizhou (26°05.5′N, 105°52.5′E; alt. 1 200 m), 18 July 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping, LIU Mei-Hua and LONG Biao. Paratypes: 2 ♀♀, same data as holotype; 1 ♂, 1 ♀, Jiaozishan, Anshun, Guizhou, alt. 1 400 m, 1 July 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping and LONG Biao; 3 ♂♂, 2 ♀♀, Huajiang Grand Canyon, Guanling, Guizhou, alt. 640 m, Nov. – Dec. 2008 – 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping and LONG Biao; 1 ♀, 35 km, Houchang, Puding, Guizhou, alt. 1 550 m, 1 Sep. 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping, LIU Mei-Hua, XIONG Chang-Ming and LONG Biao; 1 ♂, Langfengguan Forest Farm, Ziyun, Guizhou, alt. 1 300 m, 25 Feb. 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping and LONG Biao; 3 ♂♂, Chengguan Forest Farm, Guizhou, alt. 1 200 m, Feb. – Mar. 2008, collected by WEI Lian-Meng, JIANG Shao-Gui and CAO Wei-Ping; 1 ♂, Fanjingshan, Guizhou, alt. 1 000 m, 4 July 1985, collected by WEI Lian-Meng and LIU Mei-Hua; 1 ♂, Yuntaishan, Shibing, Guizhou, alt. 700 m, 16 Sep. 1993, collected by WEI Lian-Meng, ZHANG Xiao and LIU Mei-Hua; 1 ♀, Dashahe, Daozhen, Guizhou, alt. 1 200 m, 20 Aug. 2004, collected by YANG Mao-Fa; 2 ♂♂, 4 ♀♀, Kuankuoshui, Guizhou, alt. 1 500 m, July – Sep. 1984 – 1988, collected by WEI Lian-Meng and LIU Mei-Hua.

The new species is closely related to *M. flavibasisoides* sp. nov., but can be separated from the latter by prescence of the frontal vitta, although as narrow as line; first flagellomere not dark yellow, slightly brownish black, posterior spiracle not yellow, but blackish brown; f_1 blackish brown except tip yellow; f_{2-3} usually more or less darkish brown medially, f_2 with a very developed preapical *an*, which is about as long as thickenss of f_2, and obliquely arranged 2 *pd*, upper one stronger; t_2 with 2 *p* instead of 3 *p*, t_3 with 1 *av* and 1 *ad* instead of 2 *av* and 2 *ad*; each of tergites 3 – 4 without faint dark spot changed colour depending on view angle.

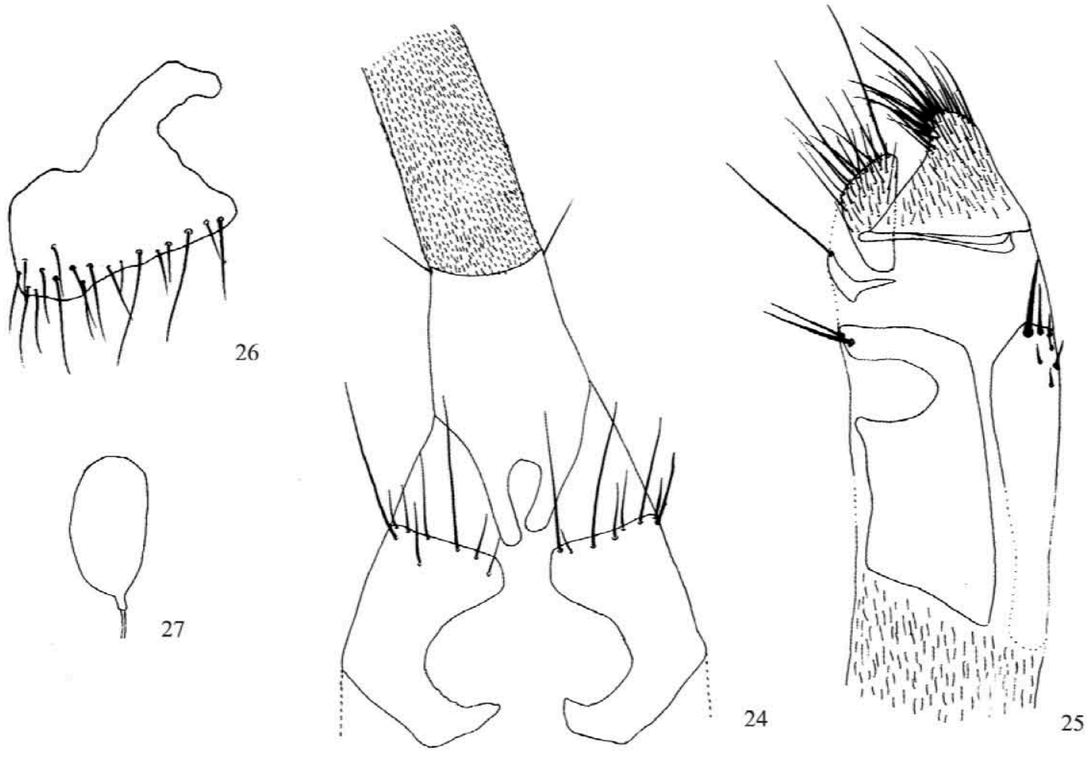
Etymology. The specific name is from Latin the word "*flavibasis*", meaning "yellow base", and "*sub*" meaning "to be close to", in reference to its similarity to *M. flavibasis*.

3.4 *Myospila sublauta* sp. nov. (Figs 20 – 27)

Male. Body length about 8 mm. Head large and round, ground colour black to brownish black, covered with silver yellow pruinosity anteriorly. Compound eye bare, anterior inner facets are somewhat



Figs 20 – 23. Male and female terminalia of *Myospila sublauta* sp. nov. 20. Male terminalia in posterior view. 21. Male terminalia in profile. 22. Male sternite 5 in ventral view. 23. Female tergite 7 in dorsal view (flattened).



Figs 24 – 27. Female terminalia of *Myospila sublauta* sp. nov. 24. Female tergites 6 – 7 in dorsal view. 25. Female tergites 8 – 9, sternites 8 – 9 and cercus in lateral view. 26. Female tergite 6 in dorsal view (pressed flatly). 27. Female spermathecae.

enlarged. Frons narrow, about as wide as 0.45 of first flagellomere-width or equal to 1.5 of parafacial width. Frontal vitta disappears at narrowest point. Reclinate upper orbital seta 1. Inclined frontal setae 5 – 6, mixed with individual setulae, distributed in anterior half. Antenna brownish dark, with first flagellomere darker, but sometimes brownish yellow at base. Pedicel and scape brown. First flagellomere about 2.5 times as wide as its width or about 2.4 times as long as pedicel-length. Arista yellowish brown, long-plumose, length of rays slowly decreasing from middle onwards, longest rays about as long as 4/5 of first flagellomere-length. Lunule brown. Parafacial about as wide as 0.3 of first flagellomere-width. Lower facial margin protruding, but not beyond frons in profile. Vibrissa strong. Palpus stick-like, black. Prementum stout, brown. Labrum brown, developed. Gena slightly shorter than first flagellomere-width or about 0.09 as high as eye-height. Postgena with dark setulae. Median occipital sclerite with long trapezoid vitta, narrower above than below and bare of pollinosity.

Thorax. Black, pleuron more or less tinged with brownish; scutum with dense yellowish grey pruinosity; posteriorly viewed: presutural area of

scutum with pair of distinct black inner paramedian vittae backward extending to scutoscutellar suture and with large black triangular spot behind postpronotal lobe, and postsutural area of scutum with pair of faint black on outer paramedian vittae. Anterior postpronotal seta 0 and basal postpronotal seta 2. Acrostichal seta 0 + 1. Hairs between dorsocentral setal row before transverse suture in about 12 rows. Dorsocentral setae 2 + 4. Supra-alar setae 1 + 2, 1[st] postsutural weaker, just distinguishable from basal piles. *Ia* 1 + 1. Katepisternal setae 1 : 2. Prosternum haired. Katatergite densely with yellow hairs. Anatergite, katepimeron, meron, metepisternum, notopleuron, postalar wall, proepisterum and anepimeron bare. Anterior spiracle dark, posterior spiracle brownish. Scutellum dark, with basal piles on dorsum not beyond level of scutellar marginal seta but with fine pale decumbent hairs along lower margin.

Wing. Yellow, with equalet brownish black and basicosta reddish brown. Spine presents. Subcosta bow-shaped. Costa setulose ventrally. Vein R_1 setulose dorsally in basal half. Radial node setulose dorsally and ventrally. Vein R_{4+5} with 3 setulae dorsally and usually bare ventrally at most with 1 setula basally. Vein M_{1+2} slightly curved forward apically. Calypter yellow, lower ones narrow, with apex tongue-shape, with inner marginal apart from scutellum edge. Halter yellow.

Leg. Yellow, only coxa and tarsus brownish dark and f_1 brown dorsally. L Ⅰ: tibiae without middle seta. L Ⅱ: F_2 with developed basal piles anteriorly and row of *an* in basal half; with rows of *av* and *pv* developed in basal half and as weak as hairs in distal half, former stronger than latter; with preapex *ad*, undeveloped. T_2 with 4 *p*. L Ⅲ: F_3 densely with strong and uniform *ad* row and sparsely with weaker and shorter *av* row, gradually stronger towards tip; with 2 *pd* apically, with row of hair-like *pv* in distal half. T_3 with 1 *av* and 2 *ad*, respectively.

Abdomen. With same colour as thorax, each of tergites 3-4 with pair of large square dark spots which changes colours depending on viewed angle. Tergite 5 brownish apically.

Female. Body length 6.2 – 7.5 mm. Similar to male but differs as follows. Frons rather wider, narrower above than below, about 0.3 of head-width. Ocellar triangle extends to anterior margin of frons. Reclinate upper orbital setae 2, and frontal setae 5, only 2 – 3 developed. Thorax with paramedian vittae usually reaching to scutoscutellar suture. *Ia* 1 + 2. T_2 with 4 – 5 *p*, untidy. Abdomen poorly dusted and appearing somewhat shiney black. Viewed posteriorly, each of tergites 3 – 4 with unclear dark spot and narrow grey pruinose longitudinal vitta (sometimes spot on tergite 3 appearing L-shaped).

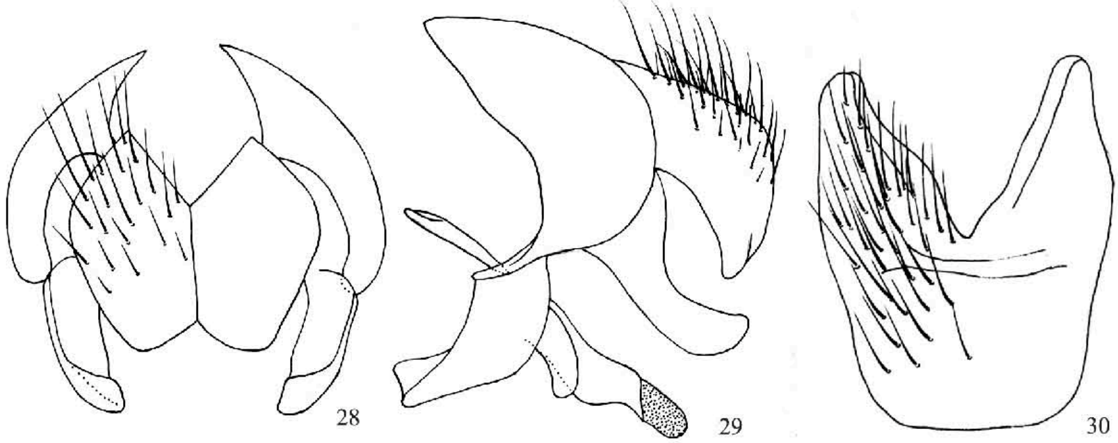
Holotype ♂, Xixiuqu Duimen, Anshun City, Guizhou (26°13′N, 105°55′E, alt. 1 300 m), Feb. – Dec. 2008 – 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping and LIU Mei-Hua. Paratypes: 10 ♂♂, 5 ♀♀, same data as holotype; 1 ♂, 1 ♀, Hongyabei, Guanling, alt. 900 m, 18 Mar. and 18 Apr. 2008, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping, JIN Wei and LIU Mei-Hua; 1 ♀, Langfengguan, Ziyun, Guizhou, alt. 900 m, 21 Feb. 2009, collected by WEI Lian-Meng, JIANG Shao-Gui, CAO Wei-Ping; 1 ♂, Chishui Alsopha Ntional Nature Reserve, Guizhou, Jinshagou, alt. 350 m, 2 June 2000, collected by WEI Lian-Meng.

The new species is related to *M. lautoides* distributed in Sichuan, but can be separated from the latter by having frons wider, about equal to 3/4 first flagellomere-width; gena shorter than 2 times width of pedicel, about wider than first flagellomere-width; longitudinal stripes on dorsum of thorax not brownish yellow; postsutural supra-alar setae 3, not 4, scutellum black; basicosta black; each of tergites 3 – 4 with pair of large square spots, change colour depending on angle viewed. Terminalia: male cercus clearly longer than in the latter, and that of the latter distinctly flattened and thin, end of which with digit-like projector, which is short and smaller than in the latter, and with more acute at apex. Tergite 5 with lateral lobe longer than that of the latter. Female: tergite 6 with upper side of dorsum unflattened, curved in middle, and with hind angle beak-like projecting. Tergite 7 with lower side unflattened. Sternite 7 narrower and longer than in the latter. Both tergite 8 and sternite 8 with different shapes compared with that of the latter. Spermatheca long ovum-like, but that of the latter is near globular.

Etymology. The specific name is from the Latin word "*laut*", meaning "clean", and "*sub*" meaning "to be close to", in reference to its similarity to *M. lauta*.

3.5 *Myospila xuthosa* sp. nov. (Figs 28 – 30)

Male. Body length about 6.5 mm. Head large and round, ground colour brownish yellow, covered with silver-grey pollen. Compound eye bare, facets somewhat enlarged on anterior inside of compound eye. Frons about as wide as anterior ocellus at narrowest portion. Frontal vitta present. Reclinate upper orbital setae 2, lower one developed. Inclined frontal setae 6, mixed with individual setulae, distributed upwards to middle of frons. Antennae yellow, first flagellomere about 3.1 times as long as width or about 2.3 times as long as pedicel-length. Arista yellowish brown, long-plumose, length of rays slowly decreasing from middle onwards, longest rays



Figs 28 – 30. Male terminalia of *Myospila xuthosa* sp. nov. 28. Male terminalia in posterior view. 29. Male terminalia in lateral view. 30. Sternite 5 in ventral view.

about 0. 6 of first flagellomere-length. Lunule brownish yellow. Parafacial about 0. 6 of first flagellomere-width apically. Lower facial margin protruding, not beyond frons in profile. Vibrissa strong. Palpus stick-like, yellow. Prementum stout, yellow. Labrum brownish yellow, developed. Gena somewhat higher than width of first flagellomere or about 0. 11 as high as head height. Postgena with dark setulae. Median occipital sclerite with long trapezoid vitta, narrower above than below and lacks pollinosity.

Thorax. Brownish yellow, prescutum darker, thinly covered with grey pruinosity. Viewed from posterior, scutum with 4 dark longitudinal vittae, black inner paramedian ones rather clean before tranverse suture; outer paramedian ones wider and faint. Anterior postpronotal seta 0 and basal postpronotal setae 2. Acrostichal seta 0 + 1. Hairs between dorsocentral setal row before transverse suture in about 10 rows. Dorsocentral setae 2 + 4. Supra-alar setae 1 + 2, 1st postsutural weaker, just distinguishable from basal piles. *Ia* 1 + 1. Katepisternal setae 1 : 2. Katatergite with dense yellow hairs. Prosternum haired. Anatergite, katepimeron, meron, metepisternum, notopleuron, postalar wall, proepisterum and anepimeron bare. Thoracic spiracles white-yellow and posterior one darker. Scutellum yellowish brown, with basal piles on dorsum not beyond level of scutellar marginal setae but with fine pale decumbent hairs along lower margin.

Wing. Yellow, with equalet brownish yellow and basicosta yellow. Spine present. Subcosta bow-like. Costa setulose ventrally. Vien R_1 setulose dorsally on basal 1/3. Radial node setulose dorsally and ventrally. Vein R_{4+5} with 5 setulae at base dorsally and with 3 setulae ventrally. Vein M_{1+2} bent forward apically. Calypter yellow, lower ones narrow, with apex tongue-shaped, with inner margin apart from scutellum edge. Halter yellow.

Leg. Yellow. L Ⅰ: tibiae without middle seta. L Ⅱ: F_2 with developed basal piles anteriorly and row of *an* in basal half, sturdy and short; with rows of *av* and *pv* developed in basal half and as weak hairs in distal half, former stronger than latter; with undeveloped preapical *ad*, and obliquely arranged 3 *pd*, lower 2 stronger. T_2 with 2 *p*. L Ⅲ: F_3 densely with strong and uniform *ad* row and sparsely with weaker and shorter *av* row gradually stronger towards tip; with 2 *pd* apically, without *pv* in distal half. T_3 with 1 *av* and 2 *ad*, respectively.

Abdomen. Concolorous with thorax. Tergites without spot and vitta except for deep brown dorsally.

Female. Unknown.

Holotype ♂, Huangguoshu, Guizhou (25°56′N, 105° 40′ E; alt. 700 m), Aug. 1995; collected by WEI Lian-Meng, LIU Mei-Hua, ZHANG Xiao and DU Yu-Zhou.

The new species is closely related to *M. flavibasisoides* sp. nov., *M. subflavibasis* sp. nov. and *M. flavibasis*. These four species can be separated from each orther by the couplets in the key.

Etymology. The specific name is from the Latin word "*xuthos*", meaning "yellow brown", in reference to the yellow brown coloration.

Acknowledgements The author is very grateful to Dr. Sinclair, B. J. (Canadian Food Inspection Agency) and Prof. WANG, P-S (Guizhou Academy of Sciences) for correcting the English and providing valuable advice.

REFERENCES

Couri, M. S. and de. Carvalho, C. J. B. 2002a. Part Ⅱ. Apical Groups. *In*: Carvalho, C. J. B. (eds.), Muscidae (Diptera) of the Neotropical Region: Taxonomy. Editora Universidade Federal do Paraná, Curitiba. pp. 133 – 287.

Emden, F. I. van. 1965. Muscidae. *Fauna India*, *Diptera*, (1): 1

-647.

Fan, Z-D 1992. Key to the Common Flies of China (2nd ed). Science Press, Beijing.

Feng, Y 2000a. Three new species of Muscidae from Western Sichuan, China (Diptera: Muscidae). *Chinese Journal of Vector Biology and Control*, 11 (2): 81-85.

Feng, Y 2000b. Five new species of Muscidae from Sichuan, China (Diptera: Muscidae). *Entomotaxonomia*, 22 (1): 53-61.

Feng, Y 2001. Five new species of genus *Myospila* from Western Sichuan, China (Diptera: Muscidae). *Entomotaxonomia*, 23 (1): 28-34.

Feng, Y 2003. Two new species of genus *Myospila* from Sichuan, China (Diptera: Muscidae). *Sichuan Journal of Zoology*, 22 (4): 203-205.

Feng, Y 2005a. Five new species of the genus *Myospila* from China (Diptera: Muscidae). *Entomological Journal of East China*, 14 (3): 197-203.

Feng, Y 2005b. Four new species of the genus *Myospila* of the Mydaeinae (Diptera: Muscidae) from China. *Acta Parasitologica et Medica Entomologica Sinica*, 12 (4): 216-221.

Feng, Y 2007. A taxonomic study on the genus *Myospila* from Sichuan, China (Diptera: Muscidae: Mydaeinae). *Entomological Journal of East China*, 16 (4): 241-245.

Guan, Y-H, Feng, Y and Ma, Z-Y 2007. A new species of *Myospila* from Sichuan in China (Diptera: Muscidae). *Chinese Journal of Vector Biology and Control*, 18 (3): 207-208.

Hennig, W. 1952. Dipteren von den Kleinen Sunda-Inseln, aus der Ausbeute der Sunda-Expedition Rensch. Ⅳ. Family. Muscidae. *Beiträge zur Entomologie*, 2: 86-87.

Hennig, W. 1955-1964. Family. Muscidae. In Lindner: Die Fliegen der palaearktischen Region, 63b: 113-116.

Huckett, H. C. 1965. The Muscidae of Northern Canada, Alaska, and Greenland (Diptera). *Memoirs of the Entomology Sociaty of Canada*, 42: 265.

Huckett, H. C. 1975. The Muscidae of California exclusive of Subfamilies Muscinae and Stomoxyinae. *Bulletin of the California Insect Survey*, 18: 69.

Li, R 1980. Descriptions of three new species and one new record of calyptrate flies from Sichuan, China (Anthomyiidae, Muscidae, Sarcophagidae). *Acta Zootaxonomica Sinica*, 3 (5): 273-278. [动物分类学报]

Malloch, J. R. 25. Nots on Oriental Diptera. *The Philipin Journal of Science*, 26: 510.

Malloch, J. R. 1935. Exotic Muscaridae (Diptera). ⅩⅩⅩⅨ. *Annales and Magazine of Natural History*, 10 (16): 226-235.

McAlpine, J. F. (1981). Morphology and terminology-Adults. [Chapter] 2. *In*: McAlpine, J. F., Peterson, B. V., Shewell, G. E., Teskey, H. J., Vockeroth, J. R. and Wood, D. M. (Coords.), Manual of Nearctic Diptera. Vol. 1. *Agriculture Canada Monograph*, 27: 9-63.

Pont, A. C. 1968. Noona Dan Papers No. 60. Some Muscidae (Diptera) from the Philippine Islands and the Bismarck Archipelago. 2. Philippine Muscidae excluding the tribes Muscini, Dichaetomyiini and Coenosiini. *Entomologiske Meddelelser*, 36: 171-190, 14 figs.

Pont, A. C. 1972. Family Muscidae. *In*: A Catalogue of the Diptera of the Americas south of the United States. *Museu de Zoologia, Universidade de São Paulo*, 97: 1-111.

Pont, A. C. 1977. Family Muscidae *In*: Delfinado, M. D. and Hardy, D. E. (eds.), A Catalog of Diptera of the Oriental Region. The University Press of Hawaii, Honolulu. 3: 451-523.

Pont, A. C. 1980. Family Muscidae. *In*: Crosskey, R. W. (ed.), Catalogue of the Diptera of the Afrotropical Region. British Musuem (Nat. Hist.), London. 85: 746-747.

Pont, A. C. 1986. Family Muscidae *In*: Soós, Á. and Papp, L. (eds.), Catalogue of Palaearctic Diptera, Akadémiai Kiadó, Budapest. Ⅱ: 57-215.

Pont, A. C. 1989. Family Muscidae *In*: Evenhuis, N. L. (eds.), Catalog of the Diptera of the Australasian and Oceanian Regions. Bishop Museum Press and Brill, E. J., Honolulu. 86: 675-699.

Qian, W-P and Feng, Y 2005. Three new species of genus *Myospila* (Diptera: Muscidae) from Sichuan, China. *Sichuan Journal of Zoology*, 24 (2): 125-128.

Rondani, C. 1856. Dipterologiae Italicae prodromus. Vol: Ⅰ. Parmae. pp. 228.

Shinonaga, S. 2003. A Monograph of the Muscdae of Japan. Tokai University Press, Tokyo. pp. 217-228.

Shinonaga, S. and Iwasa, M. 1983. A new species of the genus *Myospila* Rondani from Japan (Diptera: Muscidae). *Japanese Journal of Sanitary. Zoology*, 34 (3): 295-298.

Shinonaga, S. and Thinh, T. H. 2000. Muscidae of Vietnam 3. Mydaeinae and Coenosiinae. *Japanese Journal of Systematical Entomology*, 6 (2): 185-190.

Shinonaga, S. 2002. Record of the muscid flies collected in Indonesia (Diptera, Muscidae). *Medical Entomology* & *Zoology*, 53 (2, Suppl.): 206.

Skidmore, P. 1985. The biology of the Muscidae of the world. Junk, Dordrecht. Series Entomologica, 29, xiv + 550p.

Stein, S. 1918. Zur Weitern Kenntnis Aussereuropaeischer Anthomyiden. *Annales Museum Nature of Hungary*, 16: 147-244.

Thomson, C. G. 1869. Diptera. Species nova desciptsit. Kongliga Svenska Vetenskaps-Akademien, Kongliga svenska fregatten Eugenies resa omkring jorden, Pt. 2: Zoologie, Sec. 1: Insekter. Stockholm. pp. 443-614.

Vockeroth, J. R. 1972. A review of the world genera of Mydaeinae, with a revision of the species of New Guinea and Oceania (Diptera: Muscidae). *Pacific Insecta Monograph*, 29: 1-134.

Walker, F. 1856. Catalogue of the dipterous insects collected in Singapore and Malacca by Mr. Wallace, A. R. with descriptions of new species. *Journal of the Proceedings of the Linnean Society, Zoology*, 1: 4-39.

Wei, L-M 1991. Notes on the genus *Myospila* Rondani from Guizhou Province, China (Diptera: Muscidae). *Zoological Research*, 12 (1): 11-15.

Wei, L-M 2010. Descriptions of three new species of the genus *Hypopygiopsis* Townsend from Yunnan, China (Diptera, Calliphoridae). *Acta Zootaxonomica Sinica*, 35 (4): 760-769. [动物分类学报]

Wei, L-M, Jiang, S-G and Cao, W-P 2010. Two new species of *Lasiopelta* Malloch from Guizhou, China (Diptera, Muscidae). *Acta Zootaxonomica Sinica*, 35 (3): 489-493. [动物分类学报]

Wu, C-F 1940. Catalogus Insectorum Sinensium (Catalogue of Chinese insects.). Fan Memorial Institute of Biology, Peking. 5: 524 pp.

Xue, W-Q 1996. Muscidae, *Myospila*. *In*: Xue, W-Q and Zhao, J-M (eds.), Flies of China. Liaoning Science and Technology Press. pp. 1 082-1 096.

Xue, W-Q and Yang, M 1998. Diptera, Scathophagidae, Anthomyiidae, Fanniidae, Muscidae, Calliphoridae, Sarcophagidae and Tachinidae. *In*: Wu, H (eds.), Insects of Longwangshan. China Forestry Publishing House, Beijing. pp. 328-343.

中国贵州妙蝇属（双翅目，蝇科）研究及净妙蝇群五新种记述

魏濂艨

贵州省安顺市疾病预防控制中心　安顺　561000，E-mail：wlm510520@ sina. com

摘　要　系贵州地区妙蝇属 *Myospila* Rondani 研究的系列论文之一，记述该属1新种群：净妙蝇群 *M.* species-*lauta* 并描述该新种群5新种：冯氏妙蝇 *M. fengi* sp. nov.，肖黄基妙蝇 *M. flavibasisoides* sp. nov.，亚黄基妙蝇 *M. subflavibasis* sp. nov.，亚净妙蝇 *M. sublauta* sp. nov. 和黄褐妙蝇 *M. xuthosa* sp. nov.。文中给出了净妙蝇群的定义，编制了新种群所有已知种的检索表，描述了新种详细的形态特征及其与近缘种的鉴别特征。新种的模式标本保存于作者所在单位。

1　冯氏妙蝇，新种 *Myospila fengi* sp. nov.（图1~6）

雄　体长约5.0~6.1 mm；雌　体长约5.2 mm。

新种类似庞特妙蝇 *M. ponti* Xue *et* Liu，1996。但新种背侧片具毛，腹侧片鬃2∶2；尾器：后面观肛尾叶不明显收缩变狭，后者的显然在端部收缩变狭；端部内缘显著分离，后者的几乎完全相接着；侧面观肛尾叶端部呈尖锐的鸟喙形，仅1叶；而后者的宽大，两叶；侧尾叶细狭的棒状，明显弯出于肛尾叶之外；后者的呈宽短的条形，不突出于肛尾叶之外。

另外，腹部黄的种类尚有分布于中国浙江的天目山妙蝇 *M. tianmushanica* Feng，2005，分布于海南的庞特妙蝇 *M. ponti* Xue *et* Liu，1996 和分布于菲律宾的黄腹妙蝇 *M. fulviventris*（Pont，1968）。新种与此3种可鉴别如下。

1. 体黑色，腹部黄色至黄褐色 …………………………………………… 2
2. 前股黄色，中股除端部1/3黄色外黑色……………………………… **黄腹妙蝇 *M. fulviventris*（Pont，1968）**
   前股除端部黄色外呈黑色或黑褐色，中股黄色 ………………… 3
3. 背侧片裸 …………………… **庞特妙蝇 *M. ponti* Xue *et* Liu，1996**
   背侧片具毛 ………………………………………………………………… 4
4. 雄后倾的上眶鬃2；腹侧片鬃1∶2；后股基半具后腹鬃 ………… ……………………… **天目山妙蝇 *M. tianmushanica* Feng，2005**
   雄后倾的上眶鬃1；腹侧片鬃2∶2；后股基半无后腹鬃 ………… ………………………… **冯氏妙蝇，新种 *M. fengi* sp. nov.**

正模♂，贵州关岭花江大峡谷，海拔640 m，2008~2009年9~12月，魏濂艨、蒋绍贵、曹维平、龙彪、刘美华、寿天虹等采。副模：4♂♂，1♀，同正模；1♂，1♀，贵州关岭断桥，700 m，2009年3~4月，魏濂艨、蒋绍贵、曹维平、龙彪、刘美华等采。

词源：新种以我国四川雅安市疾病预防控制中心的蝇类学家冯炎副主任医师姓氏命名，以表示对他在蝇类研究工作方面贡献的敬意。

2　肖黄基妙蝇，新种 *Myospila flavibasisoides* sp. nov.（图7~14）

雄　体长4.2~7.0 mm；雌　体长约6.5 mm。

新种类似分布于云南的黄净妙蝇 *M. flavilauta* Xue *et* Li，1996，亚黄基妙蝇 *M. subflavibasis* sp. nov. 和分布于日本及台湾的黄基妙蝇 *M. flavibasis*（Malloch，1925），它们区别如下。

1. 翅内鬃1+2 ………… **黄基妙蝇 *M. flavibasis*（Malloch，1925）**
   翅内鬃1+1 ……………………………………………………………… 2
2. 腹黑色 ………………… **黄净妙蝇 *M. flavilauta* Xue *et* Li，1996**
   腹基部黄色 ……………………………………………………………… 3
3. 雄额狭，间额消失，触角鞭节暗黄色；后气门及股节黄色……… ……………………… **肖黄基妙蝇，新种 *M. flavibasisoides* sp. nov.**
   雄额较宽，间额存在，触角鞭节黑色；后气门黑褐色，股节主要呈黑褐色 ………… **亚黄基妙蝇，新种 *M. subflavibasis* sp. nov.**

按已有的检索表（Emden，1965；薛万琦，1996；冯炎，2007），上述彼此十分近缘的4个种将因为翅内鬃的特征状况而被分开置于不同的条目下。

正模♂，贵州安顺轿子山，海拔1 400 m，1989-10-22，魏濂艨、刘美华采。副模：1♂，1♀，贵州黄果树，800 m，采集日期不详，魏濂艨、刘美华、张晓、杜予州等采；1♂，贵州平坝城关林场，1 200 m，2008-02-29，魏濂艨、刘美华、曹维平、蒋绍贵、王德祥等采。

词源：拉丁词"*flavibasis*"意为"基部黄色的"，系黄基妙蝇种名，"*oides*"意为"形状上相似的"，在此指新种类似黄基妙蝇。

3　亚黄基妙蝇，新种 *Myospila subflavibasis* sp. nov.（图15~19）

雄　体长约4.5 mm；雌　体长约6.0 mm。

新种类似肖黄基妙蝇 *M. flavibasisoides* Wei，sp. nov. 黄净妙蝇 *M. flavilauta* Xue *et* Li，1996 和黄基妙蝇 *M. flavibasis*（Malloch，1925）。四者区别详见上述检索表。

正模♂，贵州安顺龙宫，海拔1 200 m，2009年7月18日。副模：2♀♀，同正模；1♂，1♀，贵州安顺轿子山，2009年7月1日；1♂，1♀，魏濂艨、蒋绍贵、曹维平、龙彪等采集；3♂♂，2♀♀，贵州关岭花江峡谷，海拔640 m，2008~2009年11~12月；1♀，贵州普定猴场，2009年9月1日，魏濂艨、蒋绍贵、曹维平、刘美华、熊昌明、龙彪等采集；1♂，贵州紫云浪风关，海拔1 300 m，2009年2月25日，魏濂艨、蒋绍贵、曹维平、龙彪等采集；3♂♂，贵州平坝城关林场，2008~2009年2~3月；2♂♂，4♀♀，贵州绥阳宽阔水自然保护区，1984~1988年7~9月，魏濂艨、蒋绍贵、曹维平等采集；1♂，贵州梵净山，1985年7月4日，魏濂艨、刘美华采集；1♂，贵州施秉云台山，1993年9月6日，魏濂艨、刘美华、张晓等采集；1♀，贵州道真大沙河自然保护区，2004年4月8日，杨茂发采集；2♂♂，4♀♀，贵州宽阔水自然保护区，海拔1 500 m，1984~1988年7~9月，魏濂艨、刘美华采集。

词源：拉丁词"*flavibasis*"意为"基部黄色的"，系黄腹妙蝇的种名，"*sub*"意为"在下，几乎，接近"，在此指新种类似黄基妙蝇。

4　亚净妙蝇，新种 *Myospila sublauta* sp. nov.（图20~27）

雄　体长约8.0 mm；翅内鬃0+1；雌　体长6.2~

7.5 mm；翅内鬃 0+2（雌性第 2 性征）。

新种类似分布于四川的似净妙蝇 *M. lautoides* Feng, 2005，但新种额较宽，约等于触角鞭节宽的 3/4，颊高不及梗节宽的 2 倍，仅略大于鞭节宽；胸背的纵条不呈黄褐色，翅前鬃 1，而非 2；小盾片全呈黑色；前缘基鳞黑色。腹第 3、4 背板各具 1 对方块大形的变色暗斑；尾器：肛尾叶侧面观明显较长，后者的则显然扁薄，且端部的指状突较后者的短小，末端也较尖锐；第 5 腹板侧叶较后者的长。雌尾器：第 6 背板背面上缘不平齐，而是中央凹人，后角呈鸟喙形突出；第 7 背板腹缘亦不平齐；第 7 腹板较后者的细狭而长；第 8 背板和腹板的形态亦不相同；受精囊长卵形，后者的近球形。

新种与下述的肖黄基妙蝇 *M. flavibasisoides* sp. nov.，黄净妙蝇 *M. flavilauta* Xue *et* Li, 1996，黄基妙蝇 *M. flavibasis* (Malloch, 1925)，净妙蝇 *M. lauta* (Stein, 1918) 和似净妙蝇 *M. lautoides* Feng, 2005 等均很近缘，区别如下。

1. 跗节黑至黑褐色 ………………………………………………………… 2
   跗节黄色 ………………………………………………………………… 4
2. 上眶鬃缺如；腋瓣灰白；前股不全黄………………………………
   ……………………………………… **净妙蝇 *M. lauta* (Stein, 1918)**
   上眶鬃存在；腋瓣棕黄；前股全黄或不全黄 …………………… 3
3. 前缘基鳞黄色 ………………… **似净妙蝇 *M. lautoides* Feng, 2005**
   前缘基鳞黑色 …………… **亚净妙蝇，新种 *M. sublauta* sp. nov.**
4. 额较宽，约等于触角鞭节宽，间额存在；翅前鬃缺如……………
   ………………………… **黄净妙蝇 *M. flavilauta* Xue *et* Li, 1996**
   额较狭，仅略大于前单眼宽，间额在最狭处完全消失；翅前鬃存在 ………………………………………………………………………… 5
5. 前股全黄；第 5 背板黑色，仅端缘褐色…………………………
   …………………… **肖黄基妙蝇，新种 *M. flavibasisoides* sp. nov.**
   前股不全黄；第 5 背板呈桔黄色，端部带红色……………………
   …………………… **黄基妙蝇 *M. flavibasis* (Malloch, 1925)**

关键词 双翅目，蝇科，妙蝇属，新种，新种群，中国.
中图分类号 Q969.453.8

正模 ♂，安顺市开发区对门山，海拔 1 200 m，1 300 m，2008～2009 年 2～12 月，魏濂艨、蒋绍贵、曹维平、刘美华等采。副模：10 ♂♂，5 ♀♀，同正模；1 ♂，1 ♀，贵州关岭红岩碑，800～900 m，2008 年 3 月 18 日和 4 月 18 日，魏濂艨、蒋绍贵、曹维平、刘美华、金伟等采；1 ♀，贵州紫云浪风关，2009 年 2 月 21 日，魏濂艨、蒋绍贵、曹维平等采；1 ♂，贵州赤水桫椤自然保护区，350 m，2000 年 6 月 2 日；魏濂艨采。

词源：拉丁词“*laut*”，意为“洗了的，干净的”，系净妙蝇的种名，“*sub*”意为“在下，几乎，接近”，在此指新种类似净妙蝇。

5 黄褐妙蝇，新种 *Myospila xuthosa* sp. nov.（图 28～30）

体长约 6.5 mm。体黄褐色。根据新种腹部黄褐色的特征看应与黄腹妙蝇 *M. fulviventris* (Pont, 1968)，庞特妙蝇 *M. ponti* Xue *et* Liu, 1996，天目山妙蝇 *M. tianmushanica* Feng, 2005 和冯氏妙蝇，新种 *M. fengi* sp. nov. 等近缘，但新种体呈黄褐色，而后三者仅腹部黄色，胸部黑色。另外，新种也与黄基妙蝇，肖黄基妙蝇和亚黄基妙蝇等十分近缘。

正模 ♂，贵州镇宁黄果树，海拔 700 m，1995 年 8 月，魏濂艨、刘美华、张晓、杜予州等采。

词源：拉丁词“*xuthos*”，意为“黄褐色的”，在此指新种的体色呈黄褐色。